



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5 CHICAGO REGIONAL LABORATORY  
536 SOUTH CLARK STREET  
CHICAGO, ILLINOIS 60605

**Date:** 6/4/2018  
**Subject:** Review of Region 5 Data for Central Sands  
**To:** Water Division, WECA Region 5  
77 West Jackson Boulevard  
Chicago, IL 60604  
**From:** Anna Knoebel, Chemist  
US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

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*Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.*

**Attached are Results for: Central Sands**

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**Analyses included in this report:**

Anions by IC

Report Name: 1805005,1805007 Anions by IC FINAL Jun 04 18 1340



Environmental Protection Agency Region 5  
**Chicago Regional Laboratory**

536 South Clark Street, Chicago, IL 60605  
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Central Sands  
Project Number: CB022018  
Project Manager: Cheryl Burdett

**Reported:**  
Jun-04-18 13:40

**Accredited Analyses included in this Report**



**Method:** EPA 300.0 in Water

**Analysis:** Anions by IC

Analyte	Certifications
Fluoride	ISO/IEC 17025:2005
Chloride	ISO/IEC 17025:2005
<del>Nitrite as NO<sub>2</sub></del>	<del>ISO/IEC 17025:2005</del>
Sulfate as SO <sub>4</sub>	ISO/IEC 17025:2005
Bromide	ISO/IEC 17025:2005
<del>Nitrate - NO<sub>3</sub></del>	<del>ISO/IEC 17025:2005</del>
<del>Orthophosphate as PO<sub>4</sub></del>	<del>ISO/IEC 17025:2005</del>

Not included in report

**REVIEWED**  
By AK at 1:51 pm, Jun 04, 2018

Analytes not listed above are not accredited by ANAB.



## Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605  
Phone: (312) 353-8370 Fax: (312) 886-2591

Water Division, WECA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Central Sands  
Project Number: CB022018  
Project Manager: Cheryl Burdett

**Reported:**  
Jun-04-18 13:40

### ANALYSIS CASE NARRATIVE – Anions by IC

Work order #: 1805005, 1805007

Analyst: Anna Knoebel

Phone #: (312) 353-9467

#### General Information

Ninety-eight water samples for Anions by IC (fluoride, chloride, sulfate, and bromide) were received on May 2, 2018 and May 4, 2018. All holding times were met.

#### Sample Analysis and Results

The samples were analyzed May 8 – 18, 2018 for Anions by IC in water using CRL SOP AIG045A, Version #7 (SOP based on EPA 300.0). The data reported herein meets any laboratory specifications referenced in the sampling QAPP titled “*FINAL\_2018 GW Sampling Plan4\_27\_2018.pdf*” and the requirements referenced in CRL SOP AIG045A, Version #7 (SOP based on EPA 300.0) except for those listed in the QC section below.

#### Quality Control

##### Matrix Spike (MS)

The sulfate matrix spike recoveries for samples 1805005-35 (C8a, 76 %), 1805007-08 (D7a, 47 %), 1805007-18 (D11a, 76 %), 1805007-28 (E4a, 56 %), and 1805007-44 (E9b, 19 %) were below the acceptance criteria (80 – 120 %). The chloride matrix spike recoveries for samples 1805007-08 (D7a, 72 %), 1805007-18 (D11a, 73 %) and 1805007-44 (E9b, 62 %) were also below the acceptance criteria (80 – 120 %). The results were qualified “L” (The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value).

##### Duplicate (DUP)

The sulfate (12 %) and chloride (14 %) %RPD for sample 1805005-15 (B2b) were above the acceptance limit (< 9%). The results were qualified “J” (The identification of the analyte is acceptable; the reported value is an estimate).

##### Continuing Calibration Blank (CCB)

A CCB result (0.08 mg/L) for sulfate was above the MDL (0.07 mg/L). A CCB result (0.36 mg/L) for chloride was also above the MDL (0.05 mg/L). Sulfate and chloride were below the MDL in the other blanks. The blank contamination is most likely due to carryover from the high levels of sulfate in the samples. Sample results were not affected by the blank contamination because they were non-detect or more than ten times the CCB result, no qualifiers were necessary.

All other quality control audits were within CRL limits or did not result in qualification of the data.



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**Reported:**  
Jun-04-18 13:40



# Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605  
Phone:(312)353-8370 Fax:(312)886-2591

## WORK ORDER

Printed: 5/3/2018 3:33:25PM

**1805005**

## US EPA Region 5 Chicago Regional Laboratory

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

### Report To:

Cheryl Burdett  
Water Division, WECA Region 5

77 West Jackson Boulevard  
Chicago, IL 60604

Phone: (312) 886-1463  
Fax: (312) 886-2001

**Date Due:** Jun-04-18 15:00 (32 day TAT)  
**Received By:** Colin Breslin  
**Logged In By:** Robert Snyder

**Date Received:** May-02-18 09:55  
**Date Logged In:** May-03-18 09:30

### Samples Received at:

Sample tags/labels **Yes**  
Seals Intact **Yes**  
Received on ice **Yes**  
Paperwork Included **Yes**

### Work Order Comments:

Anions: Chloride and nitrate as NO3  
Full List metals

**Sample ID:** [1805005-01](#) **Sampled:** [Apr-30-18 07:19](#) **Matrix:** [Water](#)

**Sample Name:** [A1a](#) **Sample Location/Comments:** [1st Street](#)

### Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 07:19	pH = 2
Anions by IC	28	May-28-18 07:19	pH = 7
Metals ICP-AES (w)	180	Oct-27-18 07:19	pH = 3
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 07:19	pH = 2
Solids, TDS	7	May-07-18 07:19	pH = 7
TKN DA	28	May-28-18 07:19	pH = 2
TOC	28	May-28-18 07:19	pH = 2
Total Phosphorus DA	28	May-28-18 07:19	pH = 2

**Sample ID:** [1805005-02](#) **Sampled:** [Apr-30-18 07:32](#) **Matrix:** [Water](#)

**Sample Name:** [A1b](#) **Sample Location/Comments:** [1st Street](#)

### Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 07:32	pH = 2
Anions by IC	28	May-28-18 07:32	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 07:32	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 07:32	pH = 2

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-02](#) Sampled: [Apr-30-18 07:32](#) Matrix: [Water](#)

Sample Name: [A1b](#)

Sample Location/Comments: [1st Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Solids, TDS	7	May-07-18 07:32	pH = 5
TKN DA	28	May-28-18 07:32	pH = 2
TOC	28	May-28-18 07:32	pH = 2
Total Phosphorus DA	28	May-28-18 07:32	pH = 2

Sample ID: [1805005-03](#) Sampled: [Apr-30-18 08:15](#) Matrix: [Water](#)

Sample Name: [A2a](#)

Sample Location/Comments: [22nd Avenue North](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 08:15	pH = 2
Anions by IC	28	May-28-18 08:15	pH = 6
Metals ICP-AES (w)	180	Oct-27-18 08:15	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 08:15	pH = 2
Solids, TDS	7	May-07-18 08:15	pH = 6
TKN DA	28	May-28-18 08:15	pH = 2
TOC	28	May-28-18 08:15	pH = 2
Total Phosphorus DA	28	May-28-18 08:15	pH = 2

Sample ID: [1805005-04](#) Sampled: [Apr-30-18 08:24](#) Matrix: [Water](#)

Sample Name: [A2b](#)

Sample Location/Comments: [22nd Avenue North](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 08:24	pH = 2
Anions by IC	28	May-28-18 08:24	pH = 6
Metals ICP-AES (w)	180	Oct-27-18 08:24	pH = 5
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 08:24	pH = 2
Solids, TDS	7	May-07-18 08:24	pH = 6
TKN DA	28	May-28-18 08:24	pH = 2
TOC	28	May-28-18 08:24	pH = 2
Total Phosphorus DA	28	May-28-18 08:24	pH = 2

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-05](#) Sampled: [Apr-30-18 09:06](#) Matrix: [Water](#) [QC Source Sample MS/MSD](#)

Sample Name: [A3a](#) Sample Location/Comments: [2nd Street](#)

Sample Comments: [MS/MSD](#)

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 09:06	pH = 2
Anions by IC	28	May-28-18 09:06	pH = 6
Metals ICP-AES (w)	180	Oct-27-18 09:06	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:06	pH = 2
Solids, TDS	7	May-07-18 09:06	pH = 6
TKN DA	28	May-28-18 09:06	pH = 2
TOC	28	May-28-18 09:06	pH = 2
Total Phosphorus DA	28	May-28-18 09:06	pH = 2

Sample ID: [1805005-06](#) Sampled: [Apr-30-18 09:14](#) Matrix: [Water](#)

Sample Name: [A3b](#) Sample Location/Comments: [2nd Street](#)

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 09:14	pH = 2
Anions by IC	28	May-28-18 09:14	pH = 6
Metals ICP-AES (w)	180	Oct-27-18 09:14	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:14	pH = 2
Solids, TDS	7	May-07-18 09:14	pH = 6
TKN DA	28	May-28-18 09:14	pH = 2
TOC	28	May-28-18 09:14	pH = 2
Total Phosphorus DA	28	May-28-18 09:14	pH = 2

Sample ID: [1805005-07](#) Sampled: [Apr-30-18 09:38](#) Matrix: [Water](#)

Sample Name: [A4 Equip](#) Sample Location/Comments: [Cranberry Rock Road](#)

Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 09:38	pH = 2
Anions by IC	28	May-28-18 09:38	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 09:38	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:38	pH = 2
Solids, TDS	7	May-07-18 09:38	pH = 5
TKN DA	28	May-28-18 09:38	pH = 2
TOC	28	May-28-18 09:38	pH = 2

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-07](#) Sampled: [Apr-30-18 09:38](#) Matrix: [Water](#)

Sample Name: [A4 Equip](#) Sample Location/Comments: [Cranberry Rock Road](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-28-18 09:38	pH = 2

Sample ID: [1805005-08](#) Sampled: [Apr-30-18 09:06](#) Matrix: [Water](#)

Sample Name: [A3a \(Dup\)](#) Sample Location/Comments: [2nd Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 09:06	pH = 2
Anions by IC	28	May-28-18 09:06	pH = 6
Metals ICP-AES (w)	180	Oct-27-18 09:06	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:06	pH = 2
Solids, TDS	7	May-07-18 09:06	pH = 6
TKN DA	28	May-28-18 09:06	pH = 2
TOC	28	May-28-18 09:06	pH = 2
Total Phosphorus DA	28	May-28-18 09:06	pH = 2

Sample ID: [1805005-09](#) Sampled: [Apr-30-18 09:49](#) Matrix: [Water](#)

Sample Name: [FB1](#) Sample Location/Comments: [Cranberry Rock Road](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 09:49	pH = 2
Anions by IC	28	May-28-18 09:49	pH = 4
Metals ICP-AES (w)	180	Oct-27-18 09:49	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:49	pH = 2
Solids, TDS	7	May-07-18 09:49	pH = 4
TKN DA	28	May-28-18 09:49	pH = 2
TOC	28	May-28-18 09:49	pH = 2
Total Phosphorus DA	28	May-28-18 09:49	pH = 2

Sample ID: [1805005-10](#) Sampled: [Apr-30-18 09:58](#) Matrix: [Water](#)

Sample Name: [A4a](#) Sample Location/Comments: [Cranberry Rock Road](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 09:58	pH = 2
Anions by IC	28	May-28-18 09:58	pH = 6



1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-10](#) Sampled: [Apr-30-18 09:58](#) Matrix: [Water](#)

Sample Name: [A4a](#) Sample Location/Comments: [Cranberry Rock Road](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-27-18 09:58	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:58	pH = 2
Solids, TDS	7	May-07-18 09:58	pH = 6
TKN DA	28	May-28-18 09:58	pH = 2
TOC	28	May-28-18 09:58	pH = 2
Total Phosphorus DA	28	May-28-18 09:58	pH = 2

Sample ID: [1805005-11](#) Sampled: [Apr-30-18 10:09](#) Matrix: [Water](#)

Sample Name: [A4b](#) Sample Location/Comments: [Cranberry Rock Road](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 10:09	pH = 2
Anions by IC	28	May-28-18 10:09	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 10:09	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 10:09	pH = 2
Solids, TDS	7	May-07-18 10:09	pH = 5
TKN DA	28	May-28-18 10:09	pH = 2
TOC	28	May-28-18 10:09	pH = 2
Total Phosphorus DA	28	May-28-18 10:09	pH = 2

Sample ID: [1805005-12](#) Sampled: [Apr-30-18 10:51](#) Matrix: [Water](#)

Sample Name: [B1a](#) Sample Location/Comments: [20th Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 10:51	pH = 3
Anions by IC	28	May-28-18 10:51	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 10:51	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 10:51	pH = 3
Solids, TDS	7	May-07-18 10:51	pH = 5
TKN DA	28	May-28-18 10:51	pH = 3
TOC	28	May-28-18 10:51	pH = 3
Total Phosphorus DA	28	May-28-18 10:51	pH = 3

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-13](#) Sampled: [Apr-30-18 10:58](#) Matrix: [Water](#)

Sample Name: [B1b](#) Sample Location/Comments: [20th Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 10:58	pH = 2
Anions by IC	28	May-28-18 10:58	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 10:58	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 10:58	pH = 2
Solids, TDS	7	May-07-18 10:58	pH = 5
TKN DA	28	May-28-18 10:58	pH = 2
TOC	28	May-28-18 10:58	pH = 2
Total Phosphorus DA	28	May-28-18 10:58	pH = 2

Sample ID: [1805005-14](#) Sampled: [Apr-30-18 11:40](#) Matrix: [Water](#)

Sample Name: [B2a](#) Sample Location/Comments: [3rd Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 11:40	pH = 2
Anions by IC	28	May-28-18 11:40	pH = 7
Metals ICP-AES (w)	180	Oct-27-18 11:40	pH = 4
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 11:40	pH = 2
Solids, TDS	7	May-07-18 11:40	pH = 7
TKN DA	28	May-28-18 11:40	pH = 2
TOC	28	May-28-18 11:40	pH = 2
Total Phosphorus DA	28	May-28-18 11:40	pH = 2

Sample ID: [1805005-15](#) Sampled: [Apr-30-18 11:48](#) Matrix: [Water](#)

Sample Name: [B2b](#) Sample Location/Comments: [3rd Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 11:48	pH = 2
Anions by IC	28	May-28-18 11:48	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 11:48	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 11:48	pH = 2
Solids, TDS	7	May-07-18 11:48	pH = 5
TKN DA	28	May-28-18 11:48	pH = 2
TOC	28	May-28-18 11:48	pH = 2

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-15](#) Sampled: [Apr-30-18 11:48](#) Matrix: [Water](#)

Sample Name: [B2b](#) Sample Location/Comments: [3rd Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-28-18 11:48	pH = 2

Sample ID: [1805005-16](#) Sampled: [Apr-30-18 12:29](#) Matrix: [Water](#)

Sample Name: [B3a](#) Sample Location/Comments: [3rd Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 12:29	pH = 2
Anions by IC	28	May-28-18 12:29	pH = 6
Metals ICP-AES (w)	180	Oct-27-18 12:29	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 12:29	pH = 2
Solids, TDS	7	May-07-18 12:29	pH = 6
TKN DA	28	May-28-18 12:29	pH = 2
TOC	28	May-28-18 12:29	pH = 2
Total Phosphorus DA	28	May-28-18 12:29	pH = 2

Sample ID: [1805005-17](#) Sampled: [Apr-30-18 12:36](#) Matrix: [Water](#)

Sample Name: [B3b](#) Sample Location/Comments: [3rd Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 12:36	pH = 2
Anions by IC	28	May-28-18 12:36	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 12:36	pH = 3
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 12:36	pH = 2
Solids, TDS	7	May-07-18 12:36	pH = 5
TKN DA	28	May-28-18 12:36	pH = 2
TOC	28	May-28-18 12:36	pH = 2
Total Phosphorus DA	28	May-28-18 12:36	pH = 2

Sample ID: [1805005-18](#) Sampled: [Apr-30-18 13:10](#) Matrix: [Water](#)

Sample Name: [B4a](#) Sample Location/Comments: [3rd Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 13:10	pH = 2
Anions by IC	28	May-28-18 13:10	pH = 5

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-18](#) Sampled: [Apr-30-18 13:10](#) Matrix: [Water](#)

Sample Name: [B4a](#)

Sample Location/Comments: [3rd Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-27-18 13:10	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 13:10	pH = 2
Solids, TDS	7	May-07-18 13:10	pH = 5
TKN DA	28	May-28-18 13:10	pH = 2
TOC	28	May-28-18 13:10	pH = 2
Total Phosphorus DA	28	May-28-18 13:10	pH = 2

Sample ID: [1805005-19](#) Sampled: [Apr-30-18 13:41](#) Matrix: [Water](#)

Sample Name: [B4b](#)

Sample Location/Comments: [3rd Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 13:41	pH = 2
Anions by IC	28	May-28-18 13:41	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 13:41	pH = 4
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 13:41	pH = 2
Solids, TDS	7	May-07-18 13:41	pH = 5
TKN DA	28	May-28-18 13:41	pH = 2
TOC	28	May-28-18 13:41	pH = 2
Total Phosphorus DA	28	May-28-18 13:41	pH = 2

Sample ID: [1805005-20](#) Sampled: [Apr-30-18 15:02](#) Matrix: [Water](#)

Sample Name: [C1a](#)

Sample Location/Comments: [2nd Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 15:02	pH = 2
Anions by IC	28	May-28-18 15:02	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 15:02	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 15:02	pH = 2
Solids, TDS	7	May-07-18 15:02	pH = 5
TKN DA	28	May-28-18 15:02	pH = 2
TOC	28	May-28-18 15:02	pH = 2
Total Phosphorus DA	28	May-28-18 15:02	pH = 2

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-21](#) Sampled: [Apr-30-18 15:27](#) Matrix: [Water](#)

Sample Name: [C1b](#) Sample Location/Comments: [2nd Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 15:27	pH = 2
Anions by IC	28	May-28-18 15:27	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 15:27	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 15:27	pH = 2
Solids, TDS	7	May-07-18 15:27	pH = 5
TKN DA	28	May-28-18 15:27	pH = 2
TOC	28	May-28-18 15:27	pH = 2
Total Phosphorus DA	28	May-28-18 15:27	pH = 2

Sample ID: [1805005-22](#) Sampled: [Apr-30-18 16:06](#) Matrix: [Water](#)

Sample Name: [C2a](#) Sample Location/Comments: [Nelson Road](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 16:06	pH = 2
Anions by IC	28	May-28-18 16:06	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 16:06	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 16:06	pH = 2
Solids, TDS	7	May-07-18 16:06	pH = 5
TKN DA	28	May-28-18 16:06	pH = 2
TOC	28	May-28-18 16:06	pH = 2
Total Phosphorus DA	28	May-28-18 16:06	pH = 2

Sample ID: [1805005-23](#) Sampled: [Apr-30-18 16:14](#) Matrix: [Water](#)

Sample Name: [C2b](#) Sample Location/Comments: [Nelson Road](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 16:14	pH = 2
Anions by IC	28	May-28-18 16:14	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 16:14	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 16:14	pH = 2
Solids, TDS	7	May-07-18 16:14	pH = 5
TKN DA	28	May-28-18 16:14	pH = 2
TOC	28	May-28-18 16:14	pH = 2

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-23](#) Sampled: [Apr-30-18 16:14](#) Matrix: [Water](#)

Sample Name: [C2b](#) Sample Location/Comments: [Nelson Road](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-28-18 16:14	pH = 2

Sample ID: [1805005-24](#) Sampled: [Apr-30-18 14:16](#) Matrix: [Water](#)

Sample Name: [C3a](#) Sample Location/Comments: [3rd Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 14:16	pH = 2
Anions by IC	28	May-28-18 14:16	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 14:16	pH = 3
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 14:16	pH = 2
Solids, TDS	7	May-07-18 14:16	pH = 5
TKN DA	28	May-28-18 14:16	pH = 2
TOC	28	May-28-18 14:16	pH = 2
Total Phosphorus DA	28	May-28-18 14:16	pH = 2

Sample ID: [1805005-25](#) Sampled: [Apr-30-18 14:26](#) Matrix: [Water](#)

Sample Name: [C3b](#) Sample Location/Comments: [3rd Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 14:26	pH = 2
Anions by IC	28	May-28-18 14:26	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 14:26	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 14:26	pH = 2
Solids, TDS	7	May-07-18 14:26	pH = 5
TKN DA	28	May-28-18 14:26	pH = 2
TOC	28	May-28-18 14:26	pH = 2
Total Phosphorus DA	28	May-28-18 14:26	pH = 2

Sample ID: [1805005-26](#) Sampled: [May-01-18 06:29](#) Matrix: [Water](#)

Sample Name: [C5Aa](#) Sample Location/Comments: [CR G \(Nelson Road\)](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 06:29	pH = 2
Anions by IC	28	May-29-18 06:29	pH = 5

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-26](#) Sampled: [May-01-18 06:29](#) Matrix: [Water](#)

Sample Name: [C5Aa](#) Sample Location/Comments: [CR G \(Nelson Road\)](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-28-18 06:29	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 06:29	pH = 2
Solids, TDS	7	May-08-18 06:29	pH = 5
TKN DA	28	May-29-18 06:29	pH = 2
TOC	28	May-29-18 06:29	pH = 2
Total Phosphorus DA	28	May-29-18 06:29	pH = 2

Sample ID: [1805005-27](#) Sampled: [May-01-18 06:43](#) Matrix: [Water](#)

Sample Name: [C5Ab](#) Sample Location/Comments: [CR G \(Nelson Road\)](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 06:43	pH = 2
Anions by IC	28	May-29-18 06:43	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 06:43	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 06:43	pH = 2
Solids, TDS	7	May-08-18 06:43	pH = 5
TKN DA	28	May-29-18 06:43	pH = 2
TOC	28	May-29-18 06:43	pH = 2
Total Phosphorus DA	28	May-29-18 06:43	pH = 2

Sample ID: [1805005-28](#) Sampled: [May-01-18 07:06](#) Matrix: [Water](#)

Sample Name: [C6a](#) Sample Location/Comments: [CR G \(Nelson Road\)](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 07:06	pH = 2
Anions by IC	28	May-29-18 07:06	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 07:06	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 07:06	pH = 2
Solids, TDS	7	May-08-18 07:06	pH = 6
TKN DA	28	May-29-18 07:06	pH = 2
TOC	28	May-29-18 07:06	pH = 2
Total Phosphorus DA	28	May-29-18 07:06	pH = 2

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-29](#) Sampled: [May-01-18 07:15](#) Matrix: [Water](#)

Sample Name: [C6b](#) Sample Location/Comments: [CR G \(Nelson Road\)](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 07:15	pH = 3
Anions by IC	28	May-29-18 07:15	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 07:15	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 07:15	pH = 3
Solids, TDS	7	May-08-18 07:15	pH = 5
TKN DA	28	May-29-18 07:15	pH = 3
TOC	28	May-29-18 07:15	pH = 3
Total Phosphorus DA	28	May-29-18 07:15	pH = 3

Sample ID: [1805005-30](#) Sampled: [May-01-18 07:48](#) Matrix: [Water](#)

Sample Name: [C7a](#) Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 07:48	pH = 2
Anions by IC	28	May-29-18 07:48	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 07:48	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 07:48	pH = 2
Solids, TDS	7	May-08-18 07:48	pH = 6
TKN DA	28	May-29-18 07:48	pH = 2
TOC	28	May-29-18 07:48	pH = 2
Total Phosphorus DA	28	May-29-18 07:48	pH = 2

Sample ID: [1805005-31](#) Sampled: [May-01-18 08:02](#) Matrix: [Water](#)

Sample Name: [C7b](#) Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 08:02	pH = 2
Anions by IC	28	May-29-18 08:02	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 08:02	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 08:02	pH = 2
Solids, TDS	7	May-08-18 08:02	pH = 5
TKN DA	28	May-29-18 08:02	pH = 2
TOC	28	May-29-18 08:02	pH = 2



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## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-31](#) Sampled: [May-01-18 08:02](#) Matrix: [Water](#)

Sample Name: [C7b](#) Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-29-18 08:02	pH = 2

Sample ID: [1805005-32](#) Sampled: [May-01-18 07:39](#) Matrix: [Water](#)

Sample Name: [FB2](#) Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 07:39	pH = 2
Anions by IC	28	May-29-18 07:39	pH = 4
Metals ICP-AES (w)	180	Oct-28-18 07:39	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 07:39	pH = 2
Solids, TDS	7	May-08-18 07:39	pH = 4
TKN DA	28	May-29-18 07:39	pH = 2
TOC	28	May-29-18 07:39	pH = 2
Total Phosphorus DA	28	May-29-18 07:39	pH = 2

Sample ID: [1805005-33](#) Sampled: [May-01-18 07:38](#) Matrix: [Water](#)

Sample Name: [C7 equip](#) Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 07:38	pH = 2
Anions by IC	28	May-29-18 07:38	pH = 4
Metals ICP-AES (w)	180	Oct-28-18 07:38	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 07:38	pH = 2
Solids, TDS	7	May-08-18 07:38	pH = 4
TKN DA	28	May-29-18 07:38	pH = 2
TOC	28	May-29-18 07:38	pH = 2
Total Phosphorus DA	28	May-29-18 07:38	pH = 2

Sample ID: [1805005-34](#) Sampled: [May-01-18 08:02](#) Matrix: [Water](#)

Sample Name: [C7 Dup](#) Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 08:02	pH = 2
Anions by IC	28	May-29-18 08:02	pH = 5

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-34](#) Sampled: [May-01-18 08:02](#) Matrix: [Water](#)

Sample Name: [C7 Dup](#) Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-28-18 08:02	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 08:02	pH = 2
Solids, TDS	7	May-08-18 08:02	pH = 5
TKN DA	28	May-29-18 08:02	pH = 2
TOC	28	May-29-18 08:02	pH = 2
Total Phosphorus DA	28	May-29-18 08:02	pH = 2

Sample ID: [1805005-35](#) Sampled: [May-01-18 08:35](#) Matrix: [Water](#)

Sample Name: [C8a](#) Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 08:35	pH = 2
Anions by IC	28	May-29-18 08:35	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 08:35	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 08:35	pH = 2
Solids, TDS	7	May-08-18 08:35	pH = 5
TKN DA	28	May-29-18 08:35	pH = 2
TOC	28	May-29-18 08:35	pH = 2
Total Phosphorus DA	28	May-29-18 08:35	pH = 2

Sample ID: [1805005-36](#) Sampled: [May-01-18 08:42](#) Matrix: [Water](#)

Sample Name: [C8b](#) Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 08:42	pH = 2
Anions by IC	28	May-29-18 08:42	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 08:42	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 08:42	pH = 2
Solids, TDS	7	May-08-18 08:42	pH = 5
TKN DA	28	May-29-18 08:42	pH = 2
TOC	28	May-29-18 08:42	pH = 2
Total Phosphorus DA	28	May-29-18 08:42	pH = 2

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-37](#) Sampled: [May-01-18 10:00](#) Matrix: [Water](#)

Sample Name: [C9a](#)

Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 10:00	pH = 2
Anions by IC	28	May-29-18 10:00	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 10:00	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 10:00	pH = 2
Solids, TDS	7	May-08-18 10:00	pH = 5
TKN DA	28	May-29-18 10:00	pH = 2
TOC	28	May-29-18 10:00	pH = 2
Total Phosphorus DA	28	May-29-18 10:00	pH = 2

Sample ID: [1805005-38](#) Sampled: [May-01-18 10:21](#) Matrix: [Water](#)

Sample Name: [C9b](#)

Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 10:21	pH = 2
Anions by IC	28	May-29-18 10:21	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 10:21	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 10:21	pH = 2
Solids, TDS	7	May-08-18 10:21	pH = 5
TKN DA	28	May-29-18 10:21	pH = 2
TOC	28	May-29-18 10:21	pH = 2
Total Phosphorus DA	28	May-29-18 10:21	pH = 2

Sample ID: [1805005-39](#) Sampled: [May-01-18 11:05](#) Matrix: [Water](#)

Sample Name: [C10a](#)

Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 11:05	pH = 2
Anions by IC	28	May-29-18 11:05	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 11:05	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 11:05	pH = 2
Solids, TDS	7	May-08-18 11:05	pH = 6
TKN DA	28	May-29-18 11:05	pH = 2
TOC	28	May-29-18 11:05	pH = 2

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-39](#) Sampled: [May-01-18 11:05](#) Matrix: [Water](#)

Sample Name: [C10a](#) Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-29-18 11:05	pH = 2

Sample ID: [1805005-40](#) Sampled: [May-01-18 11:12](#) Matrix: [Water](#)

Sample Name: [C10b](#) Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 11:12	pH = 2
Anions by IC	28	May-29-18 11:12	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 11:12	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 11:12	pH = 2
Solids, TDS	7	May-08-18 11:12	pH = 5
TKN DA	28	May-29-18 11:12	pH = 2
TOC	28	May-29-18 11:12	pH = 2
Total Phosphorus DA	28	May-29-18 11:12	pH = 2

Sample ID: [1805005-41](#) Sampled: [May-01-18 11:46](#) Matrix: [Water](#)

Sample Name: [C11a](#) Sample Location/Comments: [20th Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 11:46	pH = 3
Anions by IC	28	May-29-18 11:46	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 11:46	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 11:46	pH = 3
Solids, TDS	7	May-08-18 11:46	pH = 6
TKN DA	28	May-29-18 11:46	pH = 3
TOC	28	May-29-18 11:46	pH = 3
Total Phosphorus DA	28	May-29-18 11:46	pH = 3

Sample ID: [1805005-42](#) Sampled: [May-01-18 11:52](#) Matrix: [Water](#)

Sample Name: [C11b](#) Sample Location/Comments: [20th Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 11:52	pH = 2
Anions by IC	28	May-29-18 11:52	pH = 5

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-42](#) Sampled: [May-01-18 11:52](#) Matrix: [Water](#)

Sample Name: [C11b](#) Sample Location/Comments: [20th Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-28-18 11:52	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 11:52	pH = 2
Solids, TDS	7	May-08-18 11:52	pH = 5
TKN DA	28	May-29-18 11:52	pH = 2
TOC	28	May-29-18 11:52	pH = 2
Total Phosphorus DA	28	May-29-18 11:52	pH = 2

Sample ID: [1805005-43](#) Sampled: [May-01-18 12:41](#) Matrix: [Water](#)

Sample Name: [C12a](#) Sample Location/Comments: [19th Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 12:41	pH = 2
Anions by IC	28	May-29-18 12:41	pH = 7
Metals ICP-AES (w)	180	Oct-28-18 12:41	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 12:41	pH = 2
Solids, TDS	7	May-08-18 12:41	pH = 7
TKN DA	28	May-29-18 12:41	pH = 2
TOC	28	May-29-18 12:41	pH = 2
Total Phosphorus DA	28	May-29-18 12:41	pH = 2

Sample ID: [1805005-44](#) Sampled: [May-01-18 12:47](#) Matrix: [Water](#)

Sample Name: [C12b](#) Sample Location/Comments: [19th Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 12:47	pH = 2
Anions by IC	28	May-29-18 12:47	pH = 7
Metals ICP-AES (w)	180	Oct-28-18 12:47	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 12:47	pH = 2
Solids, TDS	7	May-08-18 12:47	pH = 7
TKN DA	28	May-29-18 12:47	pH = 2
TOC	28	May-29-18 12:47	pH = 2
Total Phosphorus DA	28	May-29-18 12:47	pH = 2

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-45](#) Sampled: [May-01-18 13:30](#) Matrix: [Water](#)

Sample Name: [C13a](#)

Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 13:30	pH = 3
Anions by IC	28	May-29-18 13:30	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 13:30	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 13:30	pH = 3
Solids, TDS	7	May-08-18 13:30	pH = 6
TKN DA	28	May-29-18 13:30	pH = 3
TOC	28	May-29-18 13:30	pH = 3
Total Phosphorus DA	28	May-29-18 13:30	pH = 3

Sample ID: [1805005-46](#) Sampled: [May-01-18 13:39](#) Matrix: [Water](#)

Sample Name: [C13b](#)

Sample Location/Comments: [4th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 13:39	pH = 2
Anions by IC	28	May-29-18 13:39	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 13:39	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 13:39	pH = 2
Solids, TDS	7	May-08-18 13:39	pH = 5
TKN DA	28	May-29-18 13:39	pH = 2
TOC	28	May-29-18 13:39	pH = 2
Total Phosphorus DA	28	May-29-18 13:39	pH = 2

Sample ID: [1805005-47](#) Sampled: [May-01-18 14:19](#) Matrix: [Water](#)

Sample Name: [D1a](#)

Sample Location/Comments: [5th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 14:19	pH = 2
Anions by IC	28	May-29-18 14:19	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 14:19	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 14:19	pH = 2
Solids, TDS	7	May-08-18 14:19	pH = 6
TKN DA	28	May-29-18 14:19	pH = 2
TOC	28	May-29-18 14:19	pH = 2

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-47](#) Sampled: [May-01-18 14:19](#) Matrix: [Water](#)

Sample Name: [D1a](#) Sample Location/Comments: [5th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-29-18 14:19	pH = 2

Sample ID: [1805005-48](#) Sampled: [May-01-18 14:26](#) Matrix: [Water](#)

Sample Name: [D1b](#) Sample Location/Comments: [5th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 14:26	pH = 3
Anions by IC	28	May-29-18 14:26	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 14:26	pH = 3
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 14:26	pH = 3
Solids, TDS	7	May-08-18 14:26	pH = 5
TKN DA	28	May-29-18 14:26	pH = 3
TOC	28	May-29-18 14:26	pH = 3
Total Phosphorus DA	28	May-29-18 14:26	pH = 3

Sample ID: [1805005-49](#) Sampled: [May-01-18 15:00](#) Matrix: [Water](#)

Sample Name: [D2a](#) Sample Location/Comments: [5th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 15:00	pH = 3
Anions by IC	28	May-29-18 15:00	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 15:00	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 15:00	pH = 3
Solids, TDS	7	May-08-18 15:00	pH = 6
TKN DA	28	May-29-18 15:00	pH = 3
TOC	28	May-29-18 15:00	pH = 3
Total Phosphorus DA	28	May-29-18 15:00	pH = 3

Sample ID: [1805005-50](#) Sampled: [May-01-18 15:06](#) Matrix: [Water](#)

Sample Name: [D2b](#) Sample Location/Comments: [5th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 15:06	pH = 2
Anions by IC	28	May-29-18 15:06	pH = 6

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: [1805005-50](#) Sampled: [May-01-18 15:06](#) Matrix: [Water](#)

Sample Name: [D2b](#) Sample Location/Comments: [5th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-28-18 15:06	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 15:06	pH = 2
Solids, TDS	7	May-08-18 15:06	pH = 6
TKN DA	28	May-29-18 15:06	pH = 2
TOC	28	May-29-18 15:06	pH = 2
Total Phosphorus DA	28	May-29-18 15:06	pH = 2

Sample ID: [1805005-51](#) Sampled: [May-01-18 15:41](#) Matrix: [Water](#)

Sample Name: [D3a](#) Sample Location/Comments: [5th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 15:41	pH = 2
Anions by IC	28	May-29-18 15:41	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 15:41	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 15:41	pH = 2
Solids, TDS	7	May-08-18 15:41	pH = 6
TKN DA	28	May-29-18 15:41	pH = 2
TOC	28	May-29-18 15:41	pH = 2
Total Phosphorus DA	28	May-29-18 15:41	pH = 2

Sample ID: [1805005-52](#) Sampled: [May-01-18 15:48](#) Matrix: [Water](#)

Sample Name: [D3b](#) Sample Location/Comments: [5th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 15:48	pH = 2
Anions by IC	28	May-29-18 15:48	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 15:48	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 15:48	pH = 2
Solids, TDS	7	May-08-18 15:48	pH = 5
TKN DA	28	May-29-18 15:48	pH = 2
TOC	28	May-29-18 15:48	pH = 2
Total Phosphorus DA	28	May-29-18 15:48	pH = 2



1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

Sample ID: 1805005-53 Sampled: May-01-18 16:19 Matrix: Water

Sample Name: D4a Sample Location/Comments: 5th Street

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 16:19	pH = 2
Anions by IC	28	May-29-18 16:19	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 16:19	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 16:19	pH = 2
Solids, TDS	7	May-08-18 16:19	pH = 6
TKN DA	28	May-29-18 16:19	pH = 2
TOC	28	May-29-18 16:19	pH = 2
Total Phosphorus DA	28	May-29-18 16:19	pH = 2

Sample ID: 1805005-54 Sampled: May-01-18 16:26 Matrix: Water

Sample Name: D4b Sample Location/Comments: 5th Street

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 16:26	pH = 2
Anions by IC	28	May-29-18 16:26	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 16:26	pH = 3
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 16:26	pH = 2
Solids, TDS	7	May-08-18 16:26	pH = 5
TKN DA	28	May-29-18 16:26	pH = 2
TOC	28	May-29-18 16:26	pH = 2
Total Phosphorus DA	28	May-29-18 16:26	pH = 2

WORK ORDER MEMO: NCR 14118

PROJECT COMMENTS: Anions: Chloride, fluoride, bromide, sulfate.  
Full List metals

**REVIEWED**

By Amanda Wroble at 3:35 pm, May 03, 2018

Reviewed By

Date



Environmental Protection Agency Region 5  
**Chicago Regional Laboratory**

536 South Clark Street, Chicago, IL 60605  
Phone:(312)353-8370 Fax:(312)886-2591

**WORK ORDER**

Printed: 5/7/2018 9:53:28AM

**1805007**

**US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018

**Report To:**

Cheryl Burdett  
Water Division, WECA Region 5

77 West Jackson Boulevard  
Chicago, IL 60604

Phone: (312) 886-1463  
Fax: (312) 886-2001

Date Due: Jun-04-18 15:00 (30 day TAT)

Received By: Robert Snyder

Logged In By: Robert Snyder

Date Received: May-04-18 10:00

Date Logged In: May-07-18 07:38

**Samples Received at:**

Sample tags/labels **Yes**  
Seals Intact **Yes**  
Received on ice **Yes**  
Paperwork Included **Yes**

**Work Order Comments:**

Copy/Relog from 1805005. Anions: Chloride and nitrate as NO3  
Full List metals  
pH paper used in SC 16H2601

**Sample ID:** 1805007-01 **Sampled:** May-02-18 06:38 **Matrix:** Water

**Sample Name:** D5a **Sample Location/Comments:** 5th Street

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 06:38	pH = 1
Anions by IC	28	May-30-18 06:38	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 06:38	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 06:38	pH = 1
Solids, TDS	7	May-09-18 06:38	pH = 6
TKN DA	28	May-30-18 06:38	pH = 1
TOC	28	May-30-18 06:38	pH = 1
Total Phosphorus DA	28	May-30-18 06:38	pH = 1

**Sample ID:** 1805007-02 **Sampled:** May-02-18 06:46 **Matrix:** Water

**Sample Name:** D5b **Sample Location/Comments:** 5th Street

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 06:46	pH = 1
Anions by IC	28	May-30-18 06:46	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 06:46	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 06:46	pH = 1

1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: 1805007-02      Sampled: May-02-18 06:46      Matrix: Water

Sample Name: D5b      Sample Location/Comments: 5th Street

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Solids, TDS	7	May-09-18 06:46	pH = 5
TKN DA	28	May-30-18 06:46	pH = 1
TOC	28	May-30-18 06:46	pH = 1
Total Phosphorus DA	28	May-30-18 06:46	pH = 1

Sample ID: 1805007-03      Sampled: May-02-18 07:17      Matrix: Water

Sample Name: D6a      Sample Location/Comments: 5th Street

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 07:17	pH = 1
Anions by IC	28	May-30-18 07:17	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 07:17	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 07:17	pH = 1
Solids, TDS	7	May-09-18 07:17	pH = 6
TKN DA	28	May-30-18 07:17	pH = 1
TOC	28	May-30-18 07:17	pH = 1
Total Phosphorus DA	28	May-30-18 07:17	pH = 1

Sample ID: 1805007-04      Sampled: May-02-18 07:29      Matrix: Water

Sample Name: D6b      Sample Location/Comments: 5th Street

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 07:29	pH = 1
Anions by IC	28	May-30-18 07:29	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 07:29	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 07:29	pH = 1
Solids, TDS	7	May-09-18 07:29	pH = 6
TKN DA	28	May-30-18 07:29	pH = 1
TOC	28	May-30-18 07:29	pH = 1
Total Phosphorus DA	28	May-30-18 07:29	pH = 1

1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: 1805007-05      Sampled: May-02-18 08:01      Matrix: Water

Sample Name: D7 equip      Sample Location/Comments: 23rd Avenue

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 08:01	pH = 1
Anions by IC	28	May-30-18 08:01	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 08:01	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 08:01	pH = 1
Solids, TDS	7	May-09-18 08:01	pH = 5
TKN DA	28	May-30-18 08:01	pH = 1
TOC	28	May-30-18 08:01	pH = 1
Total Phosphorus DA	28	May-30-18 08:01	pH = 1

Sample ID: 1805007-06      Sampled: May-02-18 08:03      Matrix: Water

Sample Name: FB3      Sample Location/Comments: 23rd Avenue

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 08:03	pH = 1
Anions by IC	28	May-30-18 08:03	pH = 4
Metals ICP-AES (w)	180	Oct-29-18 08:03	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 08:03	pH = 1
Solids, TDS	7	May-09-18 08:03	pH = 4
TKN DA	28	May-30-18 08:03	pH = 1
TOC	28	May-30-18 08:03	pH = 1
Total Phosphorus DA	28	May-30-18 08:03	pH = 1

Sample ID: 1805007-07      Sampled: May-02-18 08:12      Matrix: Water

Sample Name: D7a Dup      Sample Location/Comments: 23rd Avenue

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 08:12	pH = 1
Anions by IC	28	May-30-18 08:12	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 08:12	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 08:12	pH = 1
Solids, TDS	7	May-09-18 08:12	pH = 6
TKN DA	28	May-30-18 08:12	pH = 1
TOC	28	May-30-18 08:12	pH = 1

1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: [1805007-07](#) Sampled: [May-02-18 08:12](#) Matrix: [Water](#)

Sample Name: [D7a Dup](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-30-18 08:12	pH = 1

Sample ID: [1805007-08](#) Sampled: [May-02-18 08:12](#) Matrix: [Water](#)

[QC Source Sample MS/MSD](#)

Sample Name: [D7a](#) Sample Location/Comments: [23rd Avenue](#)

Sample Comments: [MS/MSD](#)

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 08:12	pH = 1
Anions by IC	28	May-30-18 08:12	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 08:12	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 08:12	pH = 1
Solids, TDS	7	May-09-18 08:12	pH = 6
TKN DA	28	May-30-18 08:12	pH = 1
TOC	28	May-30-18 08:12	pH = 1
Total Phosphorus DA	28	May-30-18 08:12	pH = 1

Sample ID: [1805007-09](#) Sampled: [May-02-18 08:19](#) Matrix: [Water](#)

Sample Name: [D7b](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 08:19	pH = 1
Anions by IC	28	May-30-18 08:19	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 08:19	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 08:19	pH = 1
Solids, TDS	7	May-09-18 08:19	pH = 5
TKN DA	28	May-30-18 08:19	pH = 1
TOC	28	May-30-18 08:19	pH = 1
Total Phosphorus DA	28	May-30-18 08:19	pH = 1

Sample ID: [1805007-10](#) Sampled: [May-02-18 08:55](#) Matrix: [Water](#)

Sample Name: [D8a](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 08:55	pH = 1
Anions by IC	28	May-30-18 08:55	pH = 6

1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: [1805007-10](#) Sampled: [May-02-18 08:55](#) Matrix: [Water](#)

Sample Name: [D8a](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-29-18 08:55	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 08:55	pH = 1
Solids, TDS	7	May-09-18 08:55	pH = 6
TKN DA	28	May-30-18 08:55	pH = 1
TOC	28	May-30-18 08:55	pH = 1
Total Phosphorus DA	28	May-30-18 08:55	pH = 1

Sample ID: [1805007-11](#) Sampled: [May-02-18 09:11](#) Matrix: [Water](#)

Sample Name: [D8b](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 09:11	pH = 1
Anions by IC	28	May-30-18 09:11	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 09:11	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 09:11	pH = 1
Solids, TDS	7	May-09-18 09:11	pH = 6
TKN DA	28	May-30-18 09:11	pH = 1
TOC	28	May-30-18 09:11	pH = 1
Total Phosphorus DA	28	May-30-18 09:11	pH = 1

Sample ID: [1805007-12](#) Sampled: [May-02-18 09:45](#) Matrix: [Water](#)

Sample Name: [D9a](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 09:45	pH = 1
Anions by IC	28	May-30-18 09:45	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 09:45	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 09:45	pH = 1
Solids, TDS	7	May-09-18 09:45	pH = 6
TKN DA	28	May-30-18 09:45	pH = 1
TOC	28	May-30-18 09:45	pH = 1
Total Phosphorus DA	28	May-30-18 09:45	pH = 1

1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: [1805007-13](#) Sampled: [May-02-18 09:54](#) Matrix: [Water](#)

Sample Name: [D9b](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 09:54	pH = 1
Anions by IC	28	May-30-18 09:54	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 09:54	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 09:54	pH = 1
Solids, TDS	7	May-09-18 09:54	pH = 6
TKN DA	28	May-30-18 09:54	pH = 1
TOC	28	May-30-18 09:54	pH = 1
Total Phosphorus DA	28	May-30-18 09:54	pH = 1

Sample ID: [1805007-14](#) Sampled: [May-02-18 10:29](#) Matrix: [Water](#)

Sample Name: [D10a](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 10:29	pH = 1
Anions by IC	28	May-30-18 10:29	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 10:29	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 10:29	pH = 1
Solids, TDS	7	May-09-18 10:29	pH = 6
TKN DA	28	May-30-18 10:29	pH = 1
TOC	28	May-30-18 10:29	pH = 1
Total Phosphorus DA	28	May-30-18 10:29	pH = 1

Sample ID: [1805007-15](#) Sampled: [May-02-18 10:29](#) Matrix: [Water](#)

Sample Name: [D10a Dup](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 10:29	pH = 1
Anions by IC	28	May-30-18 10:29	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 10:29	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 10:29	pH = 1
Solids, TDS	7	May-09-18 10:29	pH = 6
TKN DA	28	May-30-18 10:29	pH = 1
TOC	28	May-30-18 10:29	pH = 1

1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: [1805007-15](#) Sampled: [May-02-18 10:29](#) Matrix: [Water](#)

Sample Name: [D10a Dup](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-30-18 10:29	pH = 1

Sample ID: [1805007-16](#) Sampled: [May-02-18 10:41](#) Matrix: [Water](#)

Sample Name: [D10b](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 10:41	pH = 1
Anions by IC	28	May-30-18 10:41	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 10:41	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 10:41	pH = 1
Solids, TDS	7	May-09-18 10:41	pH = 5
TKN DA	28	May-30-18 10:41	pH = 1
TOC	28	May-30-18 10:41	pH = 1
Total Phosphorus DA	28	May-30-18 10:41	pH = 1

Sample ID: [1805007-17](#) Sampled: [May-02-18 10:41](#) Matrix: [Water](#)

Sample Name: [D10b Dup](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 10:41	pH = 1
Anions by IC	28	May-30-18 10:41	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 10:41	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 10:41	pH = 1
Solids, TDS	7	May-09-18 10:41	pH = 5
TKN DA	28	May-30-18 10:41	pH = 1
TOC	28	May-30-18 10:41	pH = 1
Total Phosphorus DA	28	May-30-18 10:41	pH = 1

Sample ID: [1805007-18](#) Sampled: [May-02-18 11:19](#) Matrix: [Water](#)

Sample Name: [D11a](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 11:19	pH = 1
Anions by IC	28	May-30-18 11:19	pH = 6



1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: [1805007-18](#) Sampled: [May-02-18 11:19](#) Matrix: [Water](#)

Sample Name: [D11a](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-29-18 11:19	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 11:19	pH = 1
Solids, TDS	7	May-09-18 11:19	pH = 6
TKN DA	28	May-30-18 11:19	pH = 1
TOC	28	May-30-18 11:19	pH = 1
Total Phosphorus DA	28	May-30-18 11:19	pH = 1

Sample ID: [1805007-19](#) Sampled: [May-02-18 11:42](#) Matrix: [Water](#)

Sample Name: [D11b](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 11:42	pH = 1
Anions by IC	28	May-30-18 11:42	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 11:42	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 11:42	pH = 1
Solids, TDS	7	May-09-18 11:42	pH = 5
TKN DA	28	May-30-18 11:42	pH = 1
TOC	28	May-30-18 11:42	pH = 1
Total Phosphorus DA	28	May-30-18 11:42	pH = 1

Sample ID: [1805007-20](#) Sampled: [May-02-18 12:41](#) Matrix: [Water](#)

Sample Name: [E1a](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 12:41	pH = 1
Anions by IC	28	May-30-18 12:41	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 12:41	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 12:41	pH = 1
Solids, TDS	7	May-09-18 12:41	pH = 6
TKN DA	28	May-30-18 12:41	pH = 1
TOC	28	May-30-18 12:41	pH = 1
Total Phosphorus DA	28	May-30-18 12:41	pH = 1

1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: [1805007-21](#) Sampled: [May-02-18 12:58](#) Matrix: [Water](#)

Sample Name: [E1b](#) Sample Location/Comments: [23rd Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 12:58	pH = 1
Anions by IC	28	May-30-18 12:58	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 12:58	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 12:58	pH = 1
Solids, TDS	7	May-09-18 12:58	pH = 6
TKN DA	28	May-30-18 12:58	pH = 1
TOC	28	May-30-18 12:58	pH = 1
Total Phosphorus DA	28	May-30-18 12:58	pH = 1

Sample ID: [1805007-22](#) Sampled: [May-02-18 13:28](#) Matrix: [Water](#)

Sample Name: [E2a](#) Sample Location/Comments: [Porter Road](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 13:28	pH = 1
Anions by IC	28	May-30-18 13:28	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 13:28	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 13:28	pH = 1
Solids, TDS	7	May-09-18 13:28	pH = 6
TKN DA	28	May-30-18 13:28	pH = 1
TOC	28	May-30-18 13:28	pH = 1
Total Phosphorus DA	28	May-30-18 13:28	pH = 1

Sample ID: [1805007-23](#) Sampled: [May-02-18 13:37](#) Matrix: [Water](#)

Sample Name: [E2b](#) Sample Location/Comments: [Porter Road](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 13:37	pH = 1
Anions by IC	28	May-30-18 13:37	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 13:37	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 13:37	pH = 1
Solids, TDS	7	May-09-18 13:37	pH = 5
TKN DA	28	May-30-18 13:37	pH = 1
TOC	28	May-30-18 13:37	pH = 1

1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: [1805007-23](#) Sampled: [May-02-18 13:37](#) Matrix: [Water](#)

Sample Name: [E2b](#) Sample Location/Comments: [Porter Road](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-30-18 13:37	pH = 1

Sample ID: [1805007-24](#) Sampled: [May-02-18 13:28](#) Matrix: [Water](#)

Sample Name: [E2a Dup](#) Sample Location/Comments: [Porter Road](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 13:28	pH = 1
Anions by IC	28	May-30-18 13:28	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 13:28	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 13:28	pH = 1
Solids, TDS	7	May-09-18 13:28	pH = 6
TKN DA	28	May-30-18 13:28	pH = 1
TOC	28	May-30-18 13:28	pH = 1
Total Phosphorus DA	28	May-30-18 13:28	pH = 1

Sample ID: [1805007-25](#) Sampled: [May-02-18 13:37](#) Matrix: [Water](#)

Sample Name: [E2b Dup](#) Sample Location/Comments: [Porter Road](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 13:37	pH = 1
Anions by IC	28	May-30-18 13:37	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 13:37	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 13:37	pH = 1
Solids, TDS	7	May-09-18 13:37	pH = 5
TKN DA	28	May-30-18 13:37	pH = 1
TOC	28	May-30-18 13:37	pH = 1
Total Phosphorus DA	28	May-30-18 13:37	pH = 1

Sample ID: [1805007-26](#) Sampled: [May-02-18 14:03](#) Matrix: [Water](#)

Sample Name: [E3a](#) Sample Location/Comments: [7th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 14:03	pH = 1
Anions by IC	28	May-30-18 14:03	pH = 6

1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: [1805007-26](#) Sampled: [May-02-18 14:03](#) Matrix: [Water](#)

Sample Name: [E3a](#) Sample Location/Comments: [7th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-29-18 14:03	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 14:03	pH = 1
Solids, TDS	7	May-09-18 14:03	pH = 6
TKN DA	28	May-30-18 14:03	pH = 1
TOC	28	May-30-18 14:03	pH = 1
Total Phosphorus DA	28	May-30-18 14:03	pH = 1

Sample ID: [1805007-27](#) Sampled: [May-02-18 14:09](#) Matrix: [Water](#)

Sample Name: [E3b](#) Sample Location/Comments: [7th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 14:09	pH = 1
Anions by IC	28	May-30-18 14:09	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 14:09	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 14:09	pH = 1
Solids, TDS	7	May-09-18 14:09	pH = 6
TKN DA	28	May-30-18 14:09	pH = 1
TOC	28	May-30-18 14:09	pH = 1
Total Phosphorus DA	28	May-30-18 14:09	pH = 1

Sample ID: [1805007-28](#) Sampled: [May-02-18 14:37](#) Matrix: [Water](#)

Sample Name: [E4a](#) Sample Location/Comments: [7th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 14:37	pH = 1
Anions by IC	28	May-30-18 14:37	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 14:37	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 14:37	pH = 1
Solids, TDS	7	May-09-18 14:37	pH = 6
TKN DA	28	May-30-18 14:37	pH = 1
TOC	28	May-30-18 14:37	pH = 1
Total Phosphorus DA	28	May-30-18 14:37	pH = 1

1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: [1805007-29](#) Sampled: [May-02-18 14:43](#) Matrix: [Water](#)

Sample Name: [E4b](#) Sample Location/Comments: [7th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 14:43	pH = 1
Anions by IC	28	May-30-18 14:43	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 14:43	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 14:43	pH = 1
Solids, TDS	7	May-09-18 14:43	pH = 6
TKN DA	28	May-30-18 14:43	pH = 1
TOC	28	May-30-18 14:43	pH = 1
Total Phosphorus DA	28	May-30-18 14:43	pH = 1

Sample ID: [1805007-30](#) Sampled: [May-02-18 15:08](#) Matrix: [Water](#)

Sample Name: [E5a](#) Sample Location/Comments: [7th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 15:08	pH = 1
Anions by IC	28	May-30-18 15:08	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 15:08	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 15:08	pH = 1
Solids, TDS	7	May-09-18 15:08	pH = 6
TKN DA	28	May-30-18 15:08	pH = 1
TOC	28	May-30-18 15:08	pH = 1
Total Phosphorus DA	28	May-30-18 15:08	pH = 1

Sample ID: [1805007-31](#) Sampled: [May-02-18 15:13](#) Matrix: [Water](#)

Sample Name: [E5b](#) Sample Location/Comments: [7th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 15:13	pH = 1
Anions by IC	28	May-30-18 15:13	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 15:13	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 15:13	pH = 1
Solids, TDS	7	May-09-18 15:13	pH = 6
TKN DA	28	May-30-18 15:13	pH = 1
TOC	28	May-30-18 15:13	pH = 1

1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: [1805007-31](#) Sampled: [May-02-18 15:13](#) Matrix: [Water](#)

Sample Name: [E5b](#) Sample Location/Comments: [7th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-30-18 15:13	pH = 1

Sample ID: [1805007-32](#) Sampled: [May-02-18 15:38](#) Matrix: [Water](#)

Sample Name: [E6a](#) Sample Location/Comments: [20th Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 15:38	pH = 1
Anions by IC	28	May-30-18 15:38	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 15:38	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 15:38	pH = 1
Solids, TDS	7	May-09-18 15:38	pH = 6
TKN DA	28	May-30-18 15:38	pH = 1
TOC	28	May-30-18 15:38	pH = 1
Total Phosphorus DA	28	May-30-18 15:38	pH = 1

Sample ID: [1805007-33](#) Sampled: [May-02-18 15:44](#) Matrix: [Water](#)

Sample Name: [E6b](#) Sample Location/Comments: [20th Avenue](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 15:44	pH = 1
Anions by IC	28	May-30-18 15:44	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 15:44	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 15:44	pH = 1
Solids, TDS	7	May-09-18 15:44	pH = 6
TKN DA	28	May-30-18 15:44	pH = 1
TOC	28	May-30-18 15:44	pH = 1
Total Phosphorus DA	28	May-30-18 15:44	pH = 1

Sample ID: [1805007-34](#) Sampled: [May-02-18 16:09](#) Matrix: [Water](#)

Sample Name: [E7a](#) Sample Location/Comments: [7th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 16:09	pH = 1
Anions by IC	28	May-30-18 16:09	pH = 5

1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: [1805007-34](#) Sampled: [May-02-18 16:09](#) Matrix: [Water](#)

Sample Name: [E7a](#) Sample Location/Comments: [7th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-29-18 16:09	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 16:09	pH = 1
Solids, TDS	7	May-09-18 16:09	pH = 5
TKN DA	28	May-30-18 16:09	pH = 1
TOC	28	May-30-18 16:09	pH = 1
Total Phosphorus DA	28	May-30-18 16:09	pH = 1

Sample ID: [1805007-35](#) Sampled: [May-02-18 16:35](#) Matrix: [Water](#)

Sample Name: [E7b](#) Sample Location/Comments: [7th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 16:35	pH = 1
Anions by IC	28	May-30-18 16:35	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 16:35	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 16:35	pH = 1
Solids, TDS	7	May-09-18 16:35	pH = 5
TKN DA	28	May-30-18 16:35	pH = 1
TOC	28	May-30-18 16:35	pH = 1
Total Phosphorus DA	28	May-30-18 16:35	pH = 1

Sample ID: [1805007-36](#) Sampled: [May-03-18 08:40](#) Matrix: [Water](#)

Sample Name: [E8a](#) Sample Location/Comments: [7th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 08:40	pH = 1
Anions by IC	28	May-31-18 08:40	pH = 5
Metals ICP-AES (w)	180	Oct-30-18 08:40	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 08:40	pH = 1
Solids, TDS	7	May-10-18 08:40	pH = 5
TKN DA	28	May-31-18 08:40	pH = 1
TOC	28	May-31-18 08:40	pH = 1
Total Phosphorus DA	28	May-31-18 08:40	pH = 1

1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: [1805007-37](#) Sampled: [May-03-18 08:48](#) Matrix: [Water](#)

Sample Name: [E8b](#) Sample Location/Comments: [7th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 08:48	pH = 1
Anions by IC	28	May-31-18 08:48	pH = 6
Metals ICP-AES (w)	180	Oct-30-18 08:48	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 08:48	pH = 1
Solids, TDS	7	May-10-18 08:48	pH = 6
TKN DA	28	May-31-18 08:48	pH = 1
TOC	28	May-31-18 08:48	pH = 1
Total Phosphorus DA	28	May-31-18 08:48	pH = 1

Sample ID: [1805007-38](#) Sampled: [May-03-18 07:15](#) Matrix: [Water](#)

Sample Name: [E10a](#) Sample Location/Comments: [8th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 07:15	pH = 1
Anions by IC	28	May-31-18 07:15	pH = 6
Metals ICP-AES (w)	180	Oct-30-18 07:15	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 07:15	pH = 1
Solids, TDS	7	May-10-18 07:15	pH = 6
TKN DA	28	May-31-18 07:15	pH = 1
TOC	28	May-31-18 07:15	pH = 1
Total Phosphorus DA	28	May-31-18 07:15	pH = 1

Sample ID: [1805007-39](#) Sampled: [May-03-18 07:15](#) Matrix: [Water](#)

Sample Name: [E10a Dup](#) Sample Location/Comments: [8th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 07:15	pH = 1
Anions by IC	28	May-31-18 07:15	pH = 6
Metals ICP-AES (w)	180	Oct-30-18 07:15	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 07:15	pH = 1
Solids, TDS	7	May-10-18 07:15	pH = 6
TKN DA	28	May-31-18 07:15	pH = 1
TOC	28	May-31-18 07:15	pH = 1



1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: [1805007-39](#) Sampled: [May-03-18 07:15](#) Matrix: [Water](#)

Sample Name: [E10a Dup](#) Sample Location/Comments: [8th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-31-18 07:15	pH = 1

Sample ID: [1805007-40](#) Sampled: [May-03-18 07:27](#) Matrix: [Water](#)

Sample Name: [E10b](#) Sample Location/Comments: [8th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 07:27	pH = 1
Anions by IC	28	May-31-18 07:27	pH = 6
Metals ICP-AES (w)	180	Oct-30-18 07:27	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 07:27	pH = 1
Solids, TDS	7	May-10-18 07:27	pH = 6
TKN DA	28	May-31-18 07:27	pH = 1
TOC	28	May-31-18 07:27	pH = 1
Total Phosphorus DA	28	May-31-18 07:27	pH = 1

Sample ID: [1805007-41](#) Sampled: [May-03-18 07:36](#) Matrix: [Water](#)

Sample Name: [FB4](#) Sample Location/Comments: [8th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 07:36	pH = 1
Anions by IC	28	May-31-18 07:36	pH = 4
Metals ICP-AES (w)	180	Oct-30-18 07:36	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 07:36	pH = 1
Solids, TDS	7	May-10-18 07:36	pH = 4
TKN DA	28	May-31-18 07:36	pH = 1
TOC	28	May-31-18 07:36	pH = 1
Total Phosphorus DA	28	May-31-18 07:36	pH = 1

Sample ID: [1805007-42](#) Sampled: [May-03-18 07:13](#) Matrix: [Water](#)

Sample Name: [E10 Equip](#) Sample Location/Comments: [8th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 07:13	pH = 1
Anions by IC	28	May-31-18 07:13	pH = 4

1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

Sample ID: [1805007-42](#) Sampled: [May-03-18 07:13](#) Matrix: [Water](#)

Sample Name: [E10 Equip](#) Sample Location/Comments: [8th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-30-18 07:13	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 07:13	pH = 1
Solids, TDS	7	May-10-18 07:13	pH = 4
TKN DA	28	May-31-18 07:13	pH = 1
TOC	28	May-31-18 07:13	pH = 1
Total Phosphorus DA	28	May-31-18 07:13	pH = 1

Sample ID: [1805007-43](#) Sampled: [May-03-18 09:53](#) Matrix: [Water](#)

Sample Name: [E9a](#) Sample Location/Comments: [7th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 09:53	pH = 1
Anions by IC	28	May-31-18 09:53	pH = 5
Metals ICP-AES (w)	180	Oct-30-18 09:53	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 09:53	pH = 1
Solids, TDS	7	May-10-18 09:53	pH = 5
TKN DA	28	May-31-18 09:53	pH = 1
TOC	28	May-31-18 09:53	pH = 1
Total Phosphorus DA	28	May-31-18 09:53	pH = 1

Sample ID: [1805007-44](#) Sampled: [May-03-18 10:02](#) Matrix: [Water](#)

Sample Name: [E9b](#) Sample Location/Comments: [7th Street](#)

## Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 10:02	pH = 1
Anions by IC	28	May-31-18 10:02	pH = 5
Metals ICP-AES (w)	180	Oct-30-18 10:02	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 10:02	pH = 1
Solids, TDS	7	May-10-18 10:02	pH = 5
TKN DA	28	May-31-18 10:02	pH = 1
TOC	28	May-31-18 10:02	pH = 1
Total Phosphorus DA	28	May-31-18 10:02	pH = 1

1805007

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

PROJECT COMMENTS: Anions: Chloride, fluoride, bromide, sulfate.  
Full List metals

**REVIEWED***By Robert Thompson at 9:54 am, May 07, 2018*

Reviewed By

Date



Environmental Protection Agency Region 5  
**Chicago Regional Laboratory**

536 South Clark Street, Chicago, IL 60605  
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Central Sands  
Project Number: CB022018  
Project Manager: Cheryl Burdett

**Reported:**  
Jun-04-18 13:40

**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**A1a (1805005-01) Matrix: Water Sampled: Apr-30-18 07:19 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.06		0.01	0.02	mg/L	1	B18E016	May-08-18	May-11-18
Chloride	4.61		0.05	0.12	"	"	"	"	"
Sulfate as SO4	7.02		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**A1b (1805005-02) Matrix: Water Sampled: Apr-30-18 07:32 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-08-18
Chloride	1.16		0.05	0.12	"	"	"	"	"
Sulfate as SO4	5.98		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**A2a (1805005-03) Matrix: Water Sampled: Apr-30-18 08:15 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-08-18
Chloride	1.21		0.05	0.12	"	"	"	"	"
Sulfate as SO4	9.84		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**A2b (1805005-04) Matrix: Water Sampled: Apr-30-18 08:24 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.06		0.01	0.02	mg/L	1	B18E016	May-08-18	May-08-18
Chloride	0.85		0.05	0.12	"	"	"	"	"
Sulfate as SO4	5.01		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**A3a (1805005-05) Matrix: Water Sampled: Apr-30-18 09:06 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.08		0.01	0.02	mg/L	1	B18E016	May-08-18	May-08-18
Chloride	0.75		0.05	0.12	"	"	"	"	"
Sulfate as SO4	8.79		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"



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Project: Central Sands  
Project Number: CB022018  
Project Manager: Cheryl Burdett

**Reported:**  
Jun-04-18 13:40

**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**A3b (1805005-06)**

**Matrix: Water**

**Sampled: Apr-30-18 09:14**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-08-18
Chloride	0.77		0.05	0.12	"	"	"	"	"
Sulfate as SO4	6.44		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**A4 Equip (1805005-07)**

**Matrix: Water**

**Sampled: Apr-30-18 09:38**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	1.00		0.05	0.12	"	"	"	"	"
Sulfate as SO4	5.18		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**A3a (Dup) (1805005-08)**

**Matrix: Water**

**Sampled: Apr-30-18 09:06**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.08		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	0.76		0.05	0.12	"	"	"	"	"
Sulfate as SO4	7.98		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**FB1 (1805005-09)**

**Matrix: Water**

**Sampled: Apr-30-18 09:49**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	U		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	U		0.05	0.12	"	"	"	"	"
Sulfate as SO4	U		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**A4a (1805005-10)**

**Matrix: Water**

**Sampled: Apr-30-18 09:58**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.07		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	1.01		0.05	0.12	"	"	"	"	"
Sulfate as SO4	26.5		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"



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**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**A4b (1805005-11) Matrix: Water Sampled: Apr-30-18 10:09 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.06		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	0.53		0.05	0.12	"	"	"	"	"
Sulfate as SO4	10.7		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**B1a (1805005-12) Matrix: Water Sampled: Apr-30-18 10:51 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.08		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	0.71		0.05	0.12	"	"	"	"	"
Sulfate as SO4	8.18		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**B1b (1805005-13) Matrix: Water Sampled: Apr-30-18 10:58 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.09		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	1.10		0.05	0.12	"	"	"	"	"
Sulfate as SO4	7.87		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**B2a (1805005-14) Matrix: Water Sampled: Apr-30-18 11:40 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.08		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	2.77		0.05	0.12	"	"	"	"	"
Sulfate as SO4	8.81		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**B2b (1805005-15) Matrix: Water Sampled: Apr-30-18 11:48 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	0.50	J	0.05	0.12	"	"	"	"	"
Sulfate as SO4	5.10	J	0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"



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Jun-04-18 13:40

**Anions by Ion Chromatography, EPA 300.0 (modified)**  
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**B3a (1805005-16)**

**Matrix: Water**

**Sampled: Apr-30-18 12:29**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	19.5		0.05	0.12	"	"	"	"	"
Sulfate as SO4	26.3		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**B3b (1805005-17)**

**Matrix: Water**

**Sampled: Apr-30-18 12:36**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	2.09		0.05	0.12	"	"	"	"	"
Sulfate as SO4	6.72		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**B4a (1805005-18)**

**Matrix: Water**

**Sampled: Apr-30-18 13:10**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	35.0		0.05	0.12	"	"	"	"	"
Sulfate as SO4	66.3		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**B4b (1805005-19)**

**Matrix: Water**

**Sampled: Apr-30-18 13:41**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.10		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	26.7		0.05	0.12	"	"	"	"	"
Sulfate as SO4	112		0.14	0.25	"	2	"	"	May-18-18
Bromide	U		0.03	0.12	"	1	"	"	May-10-18

**C1a (1805005-20)**

**Matrix: Water**

**Sampled: Apr-30-18 15:02**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	0.73		0.05	0.12	"	"	"	"	"
Sulfate as SO4	7.79		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"



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**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**C1b (1805005-21) Matrix: Water Sampled: Apr-30-18 15:27 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	0.70		0.05	0.12	"	"	"	"	"
Sulfate as SO <sub>4</sub>	6.53		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**C2a (1805005-22) Matrix: Water Sampled: Apr-30-18 16:06 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	34.4		0.05	0.12	"	"	"	"	"
Sulfate as SO <sub>4</sub>	29.2		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**C2b (1805005-23) Matrix: Water Sampled: Apr-30-18 16:14 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	3.33		0.05	0.12	"	"	"	"	"
Sulfate as SO <sub>4</sub>	15.7		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**C3a (1805005-24) Matrix: Water Sampled: Apr-30-18 14:16 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	30.0		0.05	0.12	"	"	"	"	"
Sulfate as SO <sub>4</sub>	40.9		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**C3b (1805005-25) Matrix: Water Sampled: Apr-30-18 14:26 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	5.75		0.05	0.12	"	"	"	"	"
Sulfate as SO <sub>4</sub>	11.5		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"





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**Reported:**  
Jun-04-18 13:40

## Anions by Ion Chromatography, EPA 300.0 (modified) US EPA Region 5 Chicago Regional Laboratory

**C5Aa (1805005-26)**

**Matrix: Water**

**Sampled: May-01-18 06:29**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-10-18
Chloride	38.8		0.05	0.12	"	"	"	"	"
Sulfate as SO <sub>4</sub>	90.4		0.14	0.25	"	2	"	"	May-18-18
Bromide	0.12		0.03	0.12	"	1	"	"	May-10-18

**C5Ab (1805005-27)**

**Matrix: Water**

**Sampled: May-01-18 06:43**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	50.5		0.05	0.12	"	"	"	"	"
Sulfate as SO <sub>4</sub>	101		0.14	0.25	"	2	"	"	May-18-18
Bromide	0.14		0.03	0.12	"	1	"	"	May-09-18

**C6a (1805005-28)**

**Matrix: Water**

**Sampled: May-01-18 07:06**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	43.5		0.05	0.12	"	"	"	"	"
Sulfate as SO <sub>4</sub>	54.7		0.07	0.12	"	"	"	"	"
Bromide	0.16		0.03	0.12	"	"	"	"	"

**C6b (1805005-29)**

**Matrix: Water**

**Sampled: May-01-18 07:15**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.09		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	29.5		0.05	0.12	"	"	"	"	"
Sulfate as SO <sub>4</sub>	88.9		0.14	0.25	"	2	"	"	May-18-18
Bromide	0.17		0.03	0.12	"	1	"	"	May-09-18

**C7a (1805005-30)**

**Matrix: Water**

**Sampled: May-01-18 07:48**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	33.6		0.05	0.12	"	"	"	"	"
Sulfate as SO <sub>4</sub>	52.5		0.07	0.12	"	"	"	"	"
Bromide	0.13		0.03	0.12	"	"	"	"	"



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**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**C7b (1805005-31)**

**Matrix: Water**

**Sampled: May-01-18 08:02**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	35.9		0.05	0.12	"	"	"	"	"
Sulfate as SO4	95.2		0.14	0.25	"	2	"	"	May-18-18
Bromide	0.15		0.03	0.12	"	1	"	"	May-09-18

**FB2 (1805005-32)**

**Matrix: Water**

**Sampled: May-01-18 07:39**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	U		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	U		0.05	0.12	"	"	"	"	"
Sulfate as SO4	U		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**C7 equip (1805005-33)**

**Matrix: Water**

**Sampled: May-01-18 07:38**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.02		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	0.73		0.05	0.12	"	"	"	"	"
Sulfate as SO4	1.05		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**C7b Dup (1805005-34)**

**Matrix: Water**

**Sampled: May-01-18 08:02**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	37.3		0.05	0.12	"	"	"	"	"
Sulfate as SO4	93.7		0.14	0.25	"	2	"	"	May-18-18
Bromide	0.15		0.03	0.12	"	1	"	"	May-09-18

**C8a (1805005-35)**

**Matrix: Water**

**Sampled: May-01-18 08:35**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	15.9		0.05	0.12	"	"	"	"	"
Sulfate as SO4	44.5	L	0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"



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**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**C8b (1805005-36)**

**Matrix: Water**

**Sampled: May-01-18 08:42**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	1.84		0.05	0.12	"	"	"	"	"
Sulfate as SO <sub>4</sub>	15.9		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**C9a (1805005-37)**

**Matrix: Water**

**Sampled: May-01-18 10:00**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	3.66		0.05	0.12	"	"	"	"	"
Sulfate as SO <sub>4</sub>	16.4		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**C9b (1805005-38)**

**Matrix: Water**

**Sampled: May-01-18 10:21**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	U		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	0.56		0.05	0.12	"	"	"	"	"
Sulfate as SO <sub>4</sub>	6.69		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**C10a (1805005-39)**

**Matrix: Water**

**Sampled: May-01-18 11:05**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	6.93		0.05	0.12	"	"	"	"	"
Sulfate as SO <sub>4</sub>	3.35		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**C10b (1805005-40)**

**Matrix: Water**

**Sampled: May-01-18 11:12**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.07		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	31.3		0.05	0.12	"	"	"	"	"
Sulfate as SO <sub>4</sub>	2.03		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"



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Project: Central Sands  
Project Number: CB022018  
Project Manager: Cheryl Burdett

**Reported:**  
Jun-04-18 13:40

**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**C11a (1805005-41)**

**Matrix: Water**

**Sampled: May-01-18 11:46**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	0.78		0.05	0.12	"	"	"	"	"
Sulfate as SO4	8.99		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**C11b (1805005-42)**

**Matrix: Water**

**Sampled: May-01-18 11:52**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.10		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	0.92		0.05	0.12	"	"	"	"	"
Sulfate as SO4	6.69		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**C12a (1805005-43)**

**Matrix: Water**

**Sampled: May-01-18 12:41**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.09		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	1.68		0.05	0.12	"	"	"	"	"
Sulfate as SO4	0.91		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**C12b (1805005-44)**

**Matrix: Water**

**Sampled: May-01-18 12:47**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.07		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	1.34		0.05	0.12	"	"	"	"	"
Sulfate as SO4	0.93		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**C13a (1805005-45)**

**Matrix: Water**

**Sampled: May-01-18 13:30**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.08		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	0.60		0.05	0.12	"	"	"	"	"
Sulfate as SO4	6.46		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"



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**Reported:**  
Jun-04-18 13:40

**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**C13b (1805005-46)**

**Matrix: Water**

**Sampled: May-01-18 13:39**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.11		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	1.27		0.05	0.12	"	"	"	"	"
Sulfate as SO4	7.34		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D1a (1805005-47)**

**Matrix: Water**

**Sampled: May-01-18 14:19**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.07		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	0.53		0.05	0.12	"	"	"	"	"
Sulfate as SO4	7.67		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D1b (1805005-48)**

**Matrix: Water**

**Sampled: May-01-18 14:26**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.07		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	0.83		0.05	0.12	"	"	"	"	"
Sulfate as SO4	4.92		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D2a (1805005-49)**

**Matrix: Water**

**Sampled: May-01-18 15:00**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.06		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	17.3		0.05	0.12	"	"	"	"	"
Sulfate as SO4	44.3		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D2b (1805005-50)**

**Matrix: Water**

**Sampled: May-01-18 15:06**

**Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.11		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	38.8		0.05	0.12	"	"	"	"	"
Sulfate as SO4	90.1		0.14	0.25	"	2	"	"	May-18-18
Bromide	0.13		0.03	0.12	"	1	"	"	May-09-18



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**Reported:**  
Jun-04-18 13:40

**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**D3a (1805005-51) Matrix: Water Sampled: May-01-18 15:41 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.06		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	31.5		0.05	0.12	"	"	"	"	"
Sulfate as SO4	25.5		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D3b (1805005-52) Matrix: Water Sampled: May-01-18 15:48 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	34.4		0.05	0.12	"	"	"	"	"
Sulfate as SO4	2.55		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D4a (1805005-53) Matrix: Water Sampled: May-01-18 16:19 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	29.4		0.05	0.12	"	"	"	"	"
Sulfate as SO4	25.1		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D4b (1805005-54) Matrix: Water Sampled: May-01-18 16:26 Received: May-02-18 09:55**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	63.7		0.05	0.12	"	"	"	"	"
Sulfate as SO4	93.0		0.14	0.25	"	2	"	"	May-18-18
Bromide	0.15		0.03	0.12	"	1	"	"	May-09-18

**D5a (1805007-01) Matrix: Water Sampled: May-02-18 06:38 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	1.67		0.05	0.12	"	"	"	"	"
Sulfate as SO4	10.3		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"



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**Reported:**  
Jun-04-18 13:40

**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**D5b (1805007-02) Matrix: Water Sampled: May-02-18 06:46 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	0.79		0.05	0.12	"	"	"	"	"
Sulfate as SO4	6.65		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D6a (1805007-03) Matrix: Water Sampled: May-02-18 07:17 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	U		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	45.7		0.05	0.12	"	"	"	"	"
Sulfate as SO4	96.9		0.14	0.25	"	2	"	"	May-18-18
Bromide	0.13		0.03	0.12	"	1	"	"	May-09-18

**D6b (1805007-04) Matrix: Water Sampled: May-02-18 07:29 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	27.9		0.05	0.12	"	"	"	"	"
Sulfate as SO4	67.0		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D7 equip (1805007-05) Matrix: Water Sampled: May-02-18 08:01 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	2.07		0.05	0.12	"	"	"	"	"
Sulfate as SO4	1.27		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**FB3 (1805007-06) Matrix: Water Sampled: May-02-18 08:03 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	U		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	U		0.05	0.12	"	"	"	"	"
Sulfate as SO4	U		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"



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**Reported:**  
Jun-04-18 13:40

**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**D7a Dup (1805007-07)**

**Matrix: Water**

**Sampled: May-02-18 08:12**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	U		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	47.0		0.05	0.12	"	"	"	"	"
Sulfate as SO4	68.5		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D7a (1805007-08)**

**Matrix: Water**

**Sampled: May-02-18 08:12**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	U		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	46.8	L	0.05	0.12	"	"	"	"	"
Sulfate as SO4	68.7	L	0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D7b (1805007-09)**

**Matrix: Water**

**Sampled: May-02-18 08:19**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	41.2		0.05	0.12	"	"	"	"	"
Sulfate as SO4	112		0.14	0.25	"	2	"	"	May-18-18
Bromide	U		0.03	0.12	"	1	"	"	May-09-18

**D8a (1805007-10)**

**Matrix: Water**

**Sampled: May-02-18 08:55**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	50.6		0.05	0.12	"	"	"	"	"
Sulfate as SO4	88.8		0.07	0.12	"	"	"	"	"
Bromide	0.15		0.03	0.12	"	"	"	"	"

**D8b (1805007-11)**

**Matrix: Water**

**Sampled: May-02-18 09:11**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	66.2		0.05	0.12	"	"	"	"	"
Sulfate as SO4	86.4		0.14	0.25	"	2	"	"	May-18-18
Bromide	0.14		0.03	0.12	"	1	"	"	May-09-18





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**Reported:**  
Jun-04-18 13:40

**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**D9a (1805007-12)**

**Matrix: Water**

**Sampled: May-02-18 09:45**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-09-18
Chloride	41.4		0.05	0.12	"	"	"	"	"
Sulfate as SO4	71.0		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D9b (1805007-13)**

**Matrix: Water**

**Sampled: May-02-18 09:54**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.06		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	4.86		0.05	0.12	"	"	"	"	"
Sulfate as SO4	10.8		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D10a (1805007-14)**

**Matrix: Water**

**Sampled: May-02-18 10:29**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	22.8		0.05	0.12	"	"	"	"	"
Sulfate as SO4	28.9		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D10a Dup (1805007-15)**

**Matrix: Water**

**Sampled: May-02-18 10:29**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	22.9		0.05	0.12	"	"	"	"	"
Sulfate as SO4	29.8		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D10b (1805007-16)**

**Matrix: Water**

**Sampled: May-02-18 10:41**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	21.6		0.05	0.12	"	"	"	"	"
Sulfate as SO4	31.6		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"



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**Reported:**  
Jun-04-18 13:40

**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**D10b Dup (1805007-17)**

**Matrix: Water**

**Sampled: May-02-18 10:41**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	20.6		0.05	0.12	"	"	"	"	"
Sulfate as SO4	31.5		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D11a (1805007-18)**

**Matrix: Water**

**Sampled: May-02-18 11:19**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	22.5	L	0.05	0.12	"	"	"	"	"
Sulfate as SO4	21.4	L	0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**D11b (1805007-19)**

**Matrix: Water**

**Sampled: May-02-18 11:42**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.02		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	34.9	L	0.05	0.12	"	"	"	"	"
Sulfate as SO4	60.6	L	0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E1a (1805007-20)**

**Matrix: Water**

**Sampled: May-02-18 12:41**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	33.2		0.05	0.12	"	"	"	"	"
Sulfate as SO4	76.3		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E1b (1805007-21)**

**Matrix: Water**

**Sampled: May-02-18 12:58**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.06		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	27.3		0.05	0.12	"	"	"	"	"
Sulfate as SO4	38.0		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"



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Project: Central Sands  
Project Number: CB022018  
Project Manager: Cheryl Burdett

**Reported:**  
Jun-04-18 13:40

**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**E2a (1805007-22) Matrix: Water Sampled: May-02-18 13:28 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	29.0		0.05	0.12	"	"	"	"	"
Sulfate as SO4	8.54		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E2b (1805007-23) Matrix: Water Sampled: May-02-18 13:37 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.08		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	1.76		0.05	0.12	"	"	"	"	"
Sulfate as SO4	13.0		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E2a Dup (1805007-24) Matrix: Water Sampled: May-02-18 13:28 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	27.6		0.05	0.12	"	"	"	"	"
Sulfate as SO4	8.29		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E2b Dup (1805007-25) Matrix: Water Sampled: May-02-18 13:37 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.07		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	1.59		0.05	0.12	"	"	"	"	"
Sulfate as SO4	12.6		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E3a (1805007-26) Matrix: Water Sampled: May-02-18 14:03 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	2.01		0.05	0.12	"	"	"	"	"
Sulfate as SO4	46.7		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"



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**Reported:**  
Jun-04-18 13:40

**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**E3b (1805007-27)**

**Matrix: Water**

**Sampled: May-02-18 14:09**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.06		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	0.97		0.05	0.12	"	"	"	"	"
Sulfate as SO4	27.4		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E4a (1805007-28)**

**Matrix: Water**

**Sampled: May-02-18 14:37**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	16.4		0.05	0.12	"	"	"	"	"
Sulfate as SO4	71.0	L	0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E4b (1805007-29)**

**Matrix: Water**

**Sampled: May-02-18 14:43**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	33.7		0.05	0.12	"	"	"	"	"
Sulfate as SO4	62.8		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E5a (1805007-30)**

**Matrix: Water**

**Sampled: May-02-18 15:08**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.03		0.01	0.02	mg/L	1	B18E016	May-08-18	May-18-18
Chloride	30.8		0.05	0.12	"	"	"	"	"
Sulfate as SO4	69.3		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E5b (1805007-31)**

**Matrix: Water**

**Sampled: May-02-18 15:13**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-19-18
Chloride	28.9		0.05	0.12	"	"	"	"	"
Sulfate as SO4	61.3		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"



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**Reported:**  
Jun-04-18 13:40

**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**E6a (1805007-32)**

**Matrix: Water**

**Sampled: May-02-18 15:38**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.06		0.01	0.02	mg/L	1	B18E016	May-08-18	May-11-18
Chloride	0.48		0.05	0.12	"	"	"	"	"
Sulfate as SO4	6.00		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E6b (1805007-33)**

**Matrix: Water**

**Sampled: May-02-18 15:44**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-11-18
Chloride	0.69		0.05	0.12	"	"	"	"	"
Sulfate as SO4	5.59		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E7a (1805007-34)**

**Matrix: Water**

**Sampled: May-02-18 16:09**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.02		0.01	0.02	mg/L	1	B18E016	May-08-18	May-11-18
Chloride	33.0		0.05	0.12	"	"	"	"	"
Sulfate as SO4	41.1		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E7b (1805007-35)**

**Matrix: Water**

**Sampled: May-02-18 16:35**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	U		0.01	0.02	mg/L	1	B18E016	May-08-18	May-11-18
Chloride	32.4		0.05	0.12	"	"	"	"	"
Sulfate as SO4	47.5		0.07	0.12	"	"	"	"	"
Bromide	0.15		0.03	0.12	"	"	"	"	"

**E8a (1805007-36)**

**Matrix: Water**

**Sampled: May-03-18 08:40**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	U		0.01	0.02	mg/L	1	B18E016	May-08-18	May-11-18
Chloride	26.9		0.05	0.12	"	"	"	"	"
Sulfate as SO4	34.6		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"



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**Reported:**  
Jun-04-18 13:40

**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**E8b (1805007-37) Matrix: Water Sampled: May-03-18 08:48 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-11-18
Chloride	37.1		0.05	0.12	"	"	"	"	"
Sulfate as SO4	60.6		0.07	0.12	"	"	"	"	"
Bromide	0.14		0.03	0.12	"	"	"	"	"

**E10a (1805007-38) Matrix: Water Sampled: May-03-18 07:15 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.06		0.01	0.02	mg/L	1	B18E016	May-08-18	May-11-18
Chloride	0.58		0.05	0.12	"	"	"	"	"
Sulfate as SO4	8.54		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E10a Dup (1805007-39) Matrix: Water Sampled: May-03-18 07:15 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-11-18
Chloride	0.57		0.05	0.12	"	"	"	"	"
Sulfate as SO4	8.23		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E10b (1805007-40) Matrix: Water Sampled: May-03-18 07:27 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.04		0.01	0.02	mg/L	1	B18E016	May-08-18	May-11-18
Chloride	1.05		0.05	0.12	"	"	"	"	"
Sulfate as SO4	10.2		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**FB4 (1805007-41) Matrix: Water Sampled: May-03-18 07:36 Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	U		0.01	0.02	mg/L	1	B18E016	May-08-18	May-11-18
Chloride	U		0.05	0.12	"	"	"	"	"
Sulfate as SO4	U		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"



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**Reported:**  
Jun-04-18 13:40

**Anions by Ion Chromatography, EPA 300.0 (modified)**  
**US EPA Region 5 Chicago Regional Laboratory**

**E10 Equip (1805007-42)**

**Matrix: Water**

**Sampled: May-03-18 07:13**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	U		0.01	0.02	mg/L	1	B18E016	May-08-18	May-11-18
Chloride	U		0.05	0.12	"	"	"	"	"
Sulfate as SO4	U		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E9a (1805007-43)**

**Matrix: Water**

**Sampled: May-03-18 09:53**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.06		0.01	0.02	mg/L	1	B18E016	May-08-18	May-11-18
Chloride	31.2		0.05	0.12	"	"	"	"	"
Sulfate as SO4	64.8		0.07	0.12	"	"	"	"	"
Bromide	U		0.03	0.12	"	"	"	"	"

**E9b (1805007-44)**

**Matrix: Water**

**Sampled: May-03-18 10:02**

**Received: May-04-18 10:00**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Fluoride	0.05		0.01	0.02	mg/L	1	B18E016	May-08-18	May-11-18
Chloride	32.1	L	0.05	0.12	"	"	"	"	"
Sulfate as SO4	62.3	L	0.07	0.12	"	"	"	"	"
Bromide	0.16		0.03	0.12	"	"	"	"	"



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**Reported:**  
Jun-04-18 13:40

**Notes and Definitions**

- L The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- J The identification of the analyte is acceptable; the reported value is an estimate.
- \* This Quality Control measure meets the requirements of the CRL SOP for this analyte.
- U Not Detected
- NR Not Reported
- Q QC limit Exceeded